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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------|---------------------|------------------|
| 09/450,912      | 11/29/1999  | BRIAN JOSEPH McNAMARA | 17481               | 8320             |

7590 12/17/2002

THE WHITAKER CORPORATION  
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[REDACTED] EXAMINER

SMITH, SHEILA B

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2685     |              |

DATE MAILED: 12/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                        |
|------------------------------|------------------------|------------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b>    |
|                              | 09/450,912             | MCNAMARA, BRIAN JOSEPH |
|                              | <b>Examiner</b>        | <b>Art Unit</b>        |
|                              | Sheila B. Smith        | 2685                   |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on \_\_\_\_.  
 2a) This action is **FINAL**.                  2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-21 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-21 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.  
 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.  
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
     a) The translation of the foreign language provisional application has been received.  
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

|   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                              | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ . | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (U. S. Patent Number 4,905,306) in view of Liu et al. (U. S. Patent Number 5,808,879).

*Regarding claims 1,2,3,5,7, Anderson discloses essentially all the claimed invention as set forth in the instant application, further Anderson discloses a filter switching arrangement for a tuner. In addition Anderson discloses a first and second impedance element between an RF input port and an RF output port, receive a first RF signal and provide the signal to the output port, band control voltage source, conducting gates as disclosed in column 1 lines 59-67. However, Anderson fails to specifically disclose the use of a switching transistor.*

In the same field of endeavor Liu et al. discloses half bridge zero voltage switched PWN flyback DC/DC converter. In addition Liu et al. discloses a switching transistor as disclosed in column 6 lines 52-58.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Anderson with a switching transistor as taught by Liu et al. for the purpose of having a cheaper and more flexible circuit.

***Regarding claims 4, 6, 8 ,*** Anderson. further discloses a resistance (919)connected across the conducting gates of the transistor (901) and the drain and source nodes of the transistor (919) being in series as disclosed in column 3 lines 1-5.

***Regarding claim 9,*** Anderson. discloses everything claimed, as applied above (see claims 1 ) however, Anderson. disclose a first and second impedance element between an RF input port and an RF output port, receive a first RF signal and provide the signal to the output port as disclosed in column 6 lines 52-58.

***Regarding claim 10, 11, 12 ,*** Anderson. further discloses a resistance (919) connected across the conducting gates of the switching transistor (901) and the drain and source nodes of the switching transistor (919) being in series as disclosed in column 3 lines 1-5.

***Regarding claim 13, 14, 15 ,*** Anderson. further discloses a switching transistor is a FET and a amplifier as disclosed in column 3 lines 25-26.

***Regarding claim 16-21 ,*** Anderson. further discloses a switching transistor is a MOSFET and a amplifier as disclosed in column 3 lines 25-26.

***Response to Arguments***

1. Applicant's arguments filed 6/28/02 have been fully considered but they are not persuasive.

Regarding applicants argument concerning the switching diodes, the examiner contends that the primary reference more than adequately provides support for that limitation. The examiner agrees that the applicant disclosed in prior art the use of diodes for switches, however the primary reference provides support for this limitation.

Further the examiner contends that the tuning circuit being tuned by the first impedance element (702) and the second impedance element (703) to receive a first RF signal and to provide the first RF signal at the output port, and the tuning circuit being tuned by the first impedance element (702) alone to receive a second RF signal at the output port.

The examiner contends that Anderson discloses the claimed device except for the switching transistor, it is known in the art to use diodes as switching elements.

***Conclusion***

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheila B. Smith whose telephone number is (703)305-0104. The examiner can normally be reached on Monday-Thursday 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-6306 for regular communications and (703)308-6296 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

Application/Control Number: 09/450,912  
Art Unit: 2685

Page 6

S. Smith  
December 16, 2002



EDWARD F. URBAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600